

WHAT IS CLAIMED IS:

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1. A transmission device which cross connects channels on a synchronous multiplex transmission network which forms a ring, and which performs restoration of communication by looping back signals in a protection path when a failure occurs, said transmission device comprising:

a memory area which stores information for determining whether an alarm indication signal needs to be inserted in a channel or not, wherein the size of said memory area corresponds to the number of channels targeted for said restoration; and

a part which inserts said alarm indication signal in a channel by switching results of said determination according to predetermined information.

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2. The transmission device as claimed in claim 1, wherein said predetermined information is information for cross connection.

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3. A transmission device which includes a part for switching and recovering a path by selecting either of two path signals on a synchronous multiplex transmission network which forms a ring, wherein said transmission device switches and recovers a path without skipping an event which arises between polling accesses by a CPU

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of said transmission device.

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4. A transmission device which includes a part for switching and recovering a path by selecting either of two path signals on a synchronous multiplex transmission network which forms a ring, said transmission device comprising:

- 10 a switching part which switches a path when an alarm arises in said path;
- 15 a storing part which stores alarm information of every alarm arising and disappearing in a path;
- 20 a starting part which resets a timer and starts path monitoring by reading said alarm information; and
- 25 a recovering part which recovers a switched path after a predetermined period of path monitoring.

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5. A transmission device which performs cross connection on a synchronous multiplex transmission network, said transmission device comprising:

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a part, provided in each interface part, which performs phase adjusting of channel signals.

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6. A transmission device which performs cross connection on a synchronous multiplex

transmission network, said transmission device comprising:

a distributing part, provided in each interface part, which distributes a reference timing pulse;

5 a phase adjusting part, provided in said each interface part, which performs phase adjusting of channel signals by performing clock change for said reference timing pulse.

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7. The transmission device as claimed in
15 claim 6, wherein said phase adjusting part generates
clock change timing by using a timer.

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8. The transmission device as claimed in
claim 6, wherein said phase adjusting part generates
clock change timing by using PLL lock detection.

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9. The transmission device as claimed in
claim 6, wherein said phase adjusting part
30 comprises:

a window generating part which generates a narrow window and a wide window for monitoring phase of clock change timing; and

35 a timing generating part which generates clock change timing by monitoring said clock change timing with said narrow window during a monitoring period and by switching said narrow window to said

wide window if a predetermined condition is satisfied.

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